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color, surrounded by numerous, hyaline, clavate, incurved paraphyses, which are about 50–90μ long and 13–20μ in diameter at the top; spores at first obovate or oval, hyaline, when mature oval, subglobose, or sometimes pyriform or elliptical, slightly sordid, in mass appearing of a slightly dirty yellow color, usually slightly and sometimes strongly papillate; 17–35 by 15–22μ, mostly 26–31 by 19–21μ, very easily falling off the pedicels, which are rather obscure, hyaline, closely packed, persistent on the host, forming a dense layer about 30–50 by 3μ; spermogonia amphigenous, occupying the center of the spot, rather numerous, black or dark brown, superficial, depressed, papillate, apparently sterile, 75–100μ in diameter. On leaflets of *Amorpha fruticosa.* Rooks County, Kans. Summer, 1884 (No. 773). June 20, 1888 (Mr. E. Bartholomew, No. 223). Manhattan, Kans., June 21, 1887 (No. 905). June 20, 1889 (No. 1490). Ellis & Everhart, North American Fungi, No. 2255 a (but not b), sub. nom. *Puccinia amorphæ,* Curtis.

This species is very peculiar both in color and in possessing spermogonia. It is very distinct from the uredo stage of *Uropyxis amorphæ,* (Curt.) Schrœt. and appears earlier. The spores seem to originate at the bottom of the layer of pedicels and to be carried up by the growing pedicel. The mycelium is abundant, hyaline, branched and septate 2–3μ in diameter. The cells of the host, which are attacked, usually contain very numerous small (3–5μ) oval, or globose starch grains.

NOTES ON NEW OR RARE FUNGI FROM WESTERN NEW YORK.

By Charles E. Fairman.

The student of mycology in New York turns to the invaluable reports of Prof. C. H. Peck whenever he wishes to ascertain if a given species has been found within the limits of the State. The purpose of this article is to indicate certain species, which have been found in New York, but are not, so far as the author knows, listed in the reports of Professor Peck.

Didymium Fairmani, Sacc., *n. s.* Peridia scattered, sessile, flocose, hyaline, widely reticulate; spores smooth (8–10μ in diameter); thickly studded with crystals; columella subglobose, brownish. On leaves of *Smilacina bifolia.* August, 1886, Lyndonville, Orleans County, N. Y.

Coniosporium Fairmani, Sacc., *n. s.* Differs from the allied *C. apiosporiodes* by its much fewer conidia (5–7μ in diameter), globose, smooth, fulgineous, one nucleate. On cortex of Hubbard squash, exposed to the weather. The fungus covers the surface with black sooty patches. Lyndonville, N. Y., February 10, 1886.

Cytosporina ailanthi, Sacc., and what may be *Phoma ailanthi,* Sacc., occur on *Ailanthus glandulosus,* sparingly, in company with the more common *Camarosporium subfenestratum,* B. & C. *Cytisporium Neesii,* Cda., attacks birches used as ornamental trees.

DIPLODIA JUGLANDIS, Fr., on black walnut, April, 1888.

DIPLODIA ÆSCULI, Lév.

DIPLODIA SAMBUCINA, Sacc. . Rare.

DIPLODIA MAURA, C. & E. var. A form of this species has been found on *Pirus Americana*, which Mr. Ellis has designated as var. *Americana.*

DIPLODIA EXTENSA, Ck. & Hark. in Grev., 1881, p. 83. Occurs on bark of dead maple saplings.

DIDYMELLA LINDERÆ, (?) E. & E. On *Lindera benzoin*, April, 1889. Spores fusoid, hyaline, 4 nucleate, 18–20 by 4–5μ.

DIDYMELLA RANII, E. & E. Bull. Torr. Bot. Club, X, p. 90. The feature of our specimens is the absence (in those examined) of paraphyses. Sec. Ellis, in Lett. April 16, 1887, " If there are no paraphyses this will be a *Sphærella*."

EUTYPA VELUTINA, (Wallr.) and *Eutypa flavo-virescens*, (Hoff.) Tul. occur rarely on decorticated branches.

FENESTELLA AMORPHÆ, E. & E., has occurred for two years on small fallen hickory limbs growing while the bark was on the limb (see Journ. Mycol.).

HAPLOSPORELLA NERII, Sacc., has been found on dead stems of oleander.

HYSTERIUM FRAXINI, Pers., was found on basswood in good quantity. This is a rare habitat for this species.

MORTHIERA THÜMENII, Ck., var. *sphærocysta*, Peck. This species has been found abundantly on *Cratægus* at North Ridgeway on the County Line Road between Orleans and Niagara Counties, N. Y. The *Cratægus* trees were in use as a hedge, and the fungus bade fair to seriously impair the vitality of the plants, and certainly detracted from the beauty of their foliage. Professor Peck, to whom specimens were referred, says (in lett.) " the cells are nearly globular in your specimens, and I call it variety *sphærocysta*." *Metasphæria leiostega*, Ell., occurs on rose stems in company with *Didymella ranii.*

PHYLLOSTICTA CIRSII, Desm., occurs on leaves of Canada Thistle, and *Phyllosticta phomiformis*, Sacc., on oak leaves.

SEPTORIA STELLARIÆ, R. & D., is quite common at Lyndonville on common chickweed about door-yards, and is easily overlooked.

SEPTORIA MALVICOLA, E. & M., is abundant on *Malva rotundifolia* and often checks the growth of that weed.

SEPTORIA DIVARICATA, E. & E., was found on *Phlox divaricata*, Ridgeway, Orleans County, N. Y.

VERMICULARIA PHLOGINA, Fairman, in Bot. Gaz., March, 1887, attacks the phlox in the same locality, a little later in the season.

ZYGODESMUS MURICATUS, E. & E., Bull. Torr. Bot. Club, 1884, p. 17, rarely observed. Color nearer lilac than rose purple.

AGARICUS ADIPOSUS has been found growing from the base of living apple trees or from roots. Hartig has made the subject of root parasites a special study (Die Pflanzlichen Wurzelparasiten), and has enumerated many species.

All the species here enumerated were found, when not otherwise indicated, at Lyndonville, N. Y.

NOTES ON THE FUNGI OF HELENA, MONT.

By Rev. F. D. Kelsey.

The following notes are merely a résumé of one year's study of our local fungi; it is necessarily very meager, as my work in botany is done at intervals in a very busy professional career.

The following parasitic fungi have been found by me within a few miles of the city of Helena, Mont., in 1888:

ÆCIDIUM ABUNDANS, Pk. On *Symphoricarpus occidentalis.*
S. racemosus, var. *pauciflorus.*
ÆCIDIUM BERBERIDIS, Geml. On *Berberis repens.*
ÆCIDIUM CHRYSOPSIDIS, Ell. & And. On *Chrysopsis villosa.*
ÆCIDIUM CLEMATIDIS, DC. On *Clematis Douglasii.*
ÆCIDIUM GAURINUM, Pk. On *Gaura coccinea.*
ÆCIDIUM GLAUCIS, Dozy & Molkenb. On *Glaux maritima.*
ÆCIDIUM HEMISPHÆRICUM, Pk. On *Lactuca pulchella.*
ÆCIDIUM INTERMIXTUM, Pk. On *Iva axillaris.*
ÆCIDIUM PLANTAGINIS, Ces. On *Plantago eriopoda.*
ÆCIDIUM POROSUM, Pk. On *Vicia Americana.*
ÆCIDIUM PYROLATUM, Schw. On *Pyrola rotundifolia.*
ÆCIDIUM RANUNCULACEARUM, DC. On *Ranunculus Cymbalaria.*
Anemone multifida.
ÆCIDIUM THALACTRI-FLAVA (DC.) Wint. On *Thalictrum Fendleri.*
MELAMPSORA CERASTII, (Pers.) Schrœt. On *Cerastium arvense.*
UROMYCES HEDSARYI-PANICULATI, (Schw.) Farlow. I. and III. On *Hedysarum boreale.*
UROMYCES SPRAGUÆ, (Hark.) I. and III. On *Lewisia rediviva.*
UROMYCES TRIFOLII, (Hedw.) Lév. On *Glycyrrhiza lepidota.*

I have in herbarium collected the year previous by F. W. Anderson the following:

ÆCIDIUM GROSSULARIÆ, DC. On *Ribes floridum.*
ÆCIDIUM URTICÆ, (Schw.). On *Urtica gracilis.*
COLEOSPORIUM SONCHI-ARVENSIS, (Pers.) Lév. On *Solidago Missouriensis.*
CRONARTIUM ASCLEPIADEUM, var. THESII, Berk. On *Comandra pallida.*
MELAMPSORA EPILOBII, (Pers.) Winter. II. On *Epilobium coloratum.*
MELAMPSORA LINI, (Pers.) Winter. On *Linum Lewisii.*
MELAMPSORA POPULINA, Lév. On *Populus tremuloides.*
MELAMPSORA SALICIS-CAPREÆ, (Pers.) Wint. On several species of *Salix.*
PHRAGMIDIUM FRAGARIÆ, DC. II. and III. On *Potentilla* sp.
PHRAGMIDIUM SUBCORTICIUM, (Schrank.) Winter. I. and III. On *Rosa Sayi* ? or *blanda* ?